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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/530,087  
Filing Date: January 30, 2006  
Appellant(s): MUNRO ET AL.

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Oleg F. Kaplun  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 03/26/2008 appealing from the Office action mailed 09/17/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,356,410	Pennig	10-1994
4,858,602	Seidel	8-1989
4,227,518	Aginsky	10-1980
DE 19829228 C1	Stedtfeld	6-1998

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 9, 13, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chemello (U.S. Patent 6,077,264).

Regarding claims 1 and 21, Chemello discloses a device comprising an intramedullary pin and a bone plate. The intramedullary pin includes a longitudinal axis, a proximal end, and a distal tip. The proximal half of the pin includes at least one borehole passing through the pin transverse to the longitudinal axis. The at least one borehole defines a transverse borehole axis. The bone plate is attached to the proximal end of the pin with a length extending towards the distal end of the intramedullary pin and ends proximally above the borehole in the pin. The bone plate is further capable of contacting the greater trochanter during use. The bone plate further includes an angled tab, wherein the tab is capable of being dimensioned wherein the center of gravity of the

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tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle beta relative to a plane defined by the transverse borehole axis and longitudinally axis of the intramedullary pin, wherein the angle beta is between 0 and 100 degrees or 0 and -100 degrees. Regarding claim 7, Chemello discloses a device wherein the angle beta is capable of being between 40 and 50 degrees. Regarding claim 9, Chemello discloses a device wherein the bone plate has a circular borehole and that the proximal end of the intramedullary pin has a cylindrical elevation corresponding thereto, so that the bone plate may be disposed about the elevation. The plate has a circular borehole for a screw to pass to fix the bone plate to the intramedullary pin. A broad definition of the word cylinder can be, "a solid bounded by a closed generalized cylinder and two parallel planes ([mathworld.wolfram.com/Cylinder.html](http://mathworld.wolfram.com/Cylinder.html)), which does not require the cylinder to be circular. Therefore, the intramedullary pin has a non-circular cylindrical elevation or prism at the proximal end, so that the bone plate may be disposed about the elevation. Regarding claim 13, Chemello discloses a device wherein the tab extends around the medullary pin at an angle alpha between 10 and 200 degrees.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemello (U.S. Patent 6,077,264).

Regarding claim 6, Chemello discloses the invention as claimed except for the bone plate and the intramedullary pin being one piece. With regard to the bone plate and the intramedullary pin being a unitary structure, it is noted that Chemello discloses a device comprising a bone plate and an intramedullary pin that are rigidly secured together as a single unit. Therefore, the constituent parts are so combined as to constitute a unitary whole or structure. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 16, Chemello discloses the invention as claimed except for the center of gravity and the transverse borehole axis can be projected onto any cross-sectional area taken orthogonal to the longitudinal axis of the pin, wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the bone plate of the device of Chemello wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 1, 4-8, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264).

Regarding claim 1, Stedtfeld discloses a device comprising an intramedullary pin. The intramedullary pin includes a longitudinal axis, a proximal end, and a distal tip. The proximal half of the pin includes at least one borehole passing through transverse to the longitudinal axis of the pin and defines a transverse borehole axis. Regarding claim 4, Stedtfeld discloses a device wherein the distal half of the intramedullary pin has a transverse borehole passing through the pin. Regarding claim 5, Stedtfeld discloses a device wherein the distal half of the intramedullary pin includes at least two transverse grooves. Regarding claim 8, Stedtfeld discloses a device wherein the proximal half of the intramedullary pin includes a second transverse borehole. Stedtfeld fails to disclose the device further comprising a bone plate attached to the proximal end of the intramedullary pin. Chemello teaches a device includes a bone plate that includes an angled tab and a center of gravity that is attached to the proximal end of an intramedullary pin in order to bring fragments of bone together (column 2 lines 4-9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld to further include a bone plate attached to the proximal end of the intramedullary pin in view of Chemello in order to bring fragments of bone together.

Further regarding claim 1, the combination of Stedtfeld and Chemello disclose a device wherein the angled tab is capable of being dimensioned wherein the center of gravity of the tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle  $\beta$  relative to a plane defined by the transverse borehole axis and longitudinally axis of the

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intramedullary pin, wherein the angle  $\beta$  is between 0 and 100 degrees or 0 and -100 degrees.

Regarding claim 6, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate and the intramedullary pin being one piece. With regard to the bone plate and the intramedullary pin being a unitary structure, it is noted that the combination Stedtfeld and Chemello disclose a device comprising a bone plate and an intramedullary pin that are rigidly secured together as a single unit. Therefore, the constituent parts are so combined as to constitute a unitary whole or structure. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 7, the combination of Stedtfeld and Chemello discloses a device wherein the angle  $\beta$  is capable of being between 40 and 50 degrees.

Regarding claim 16, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the center of gravity and the transverse borehole axis can be projected onto any cross-sectional area taken orthogonal to the longitudinal axis of the pin, wherein an angle  $\beta$  between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the bone plate of the combination of Stedtfeld as modified by Chemello wherein an angle  $\beta$  between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art,



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discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Pennig (U.S. Patent 5,356,410).

Regarding claim 14, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate having at least one perforation. Pennig teaches a device comprising a bone plate attached to an intramedullary pin wherein the bone plate includes at least one perforation in order to allow bone screws to pass through the bone plate and into the bone (column 2 lines 38-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello wherein the bone plate includes at least one perforation in view of Pennig in order to allow bone screws to pass through the bone plate and into the bone.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Seidel (U.S. Patent 4,858,602).

Regarding claim 18, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate having an angled tab with a pair of arms extending toward the distal end of the intramedullary pin. Seidel teaches a device comprising an intramedullary pin and a bone plate, wherein the bone plate includes a plurality of flexible arms in order to support fractured bone segments (column 4 lines 9-

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43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello wherein the bone plate includes an angled tab with a pair of flexible arms in view of Seidel in order to support fractured bone segments.

Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Seidel (U.S. Patent 4,858,602) further in view of Pennig (U.S. Patent 5,356,410).

Regarding claims 17, 19, and 20, the combination of Stedtfeld, Chemello, and Seidel disclose the device as claimed except for the angled tab of the bone plate to include a plurality of perforations. Pennig teaches a device comprising a bone plate attached to an intramedullary pin wherein the bone plate includes an angled tab with a plurality of perforations in order to allow bone screws to pass through the bone plate and into the bone (column 2 lines 38-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello further modified by Seidel wherein the angled tab of the bone plate includes a plurality of perforations in view of Pennig in order to allow bone screws to pass through the bone plate and into the bone.

Claims 1, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aginsky (U.S. Patent 4,227,518) in view of Chemello (U.S. Patent 6,077,264).

Regarding claim 1, Aginsky discloses a device comprising an intramedullary pin and a bone plate attached to the proximal end of the intramedullary pin. The intramedullary pin includes a proximal end, a distal tip, and a longitudinal axis. The bone plate includes an angled tab, wherein the tab is capable of being dimensioned wherein the center of gravity of the tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle  $\beta$  relative to a plane defined by the transverse borehole axis and longitudinally axis of the intramedullary pin, wherein the angle  $\beta$  is between 0 and 100 degrees or 0 and  $-100$  degrees. Regarding claim 9, Aginsky discloses a device wherein the bone plate has a circular bore and the proximal end of the intramedullary pin has a cylindrical elevation corresponding thereto, so that the bone plate may be disposed about the elevation. Regarding claim 11, Aginsky discloses a device wherein the cylindrical elevation of the intramedullary pin has an external thread. Regarding claim 12, Aginsky discloses a device further comprising a nut with an internal thread corresponding to the external thread of the cylindrical elevation. Aginsky fails to disclose the device having at least one transverse borehole in the proximal half of the intramedullary pin. Chemello teaches a device comprising a bone plate and an intramedullary pin wherein the intramedullary pin has at least one transverse borehole in the proximal half of the intramedullary pin in order to insert a transverse screw through the intramedullary pin (column 4 lines 49-54). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Aginsky with a

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transverse borehole in the proximal half of the intramedullary pin in view of Chemello in order to insert a transverse screw through the intramedullary pin.

**(10) Response to Argument**

A. Claims 1, 7, 9, 13, and 21 under 35 U.S.C. 102(b) over Chemello

The applicant's argument that Chemello does not disclose a device comprising a bone plate including an angled tab ***configured and dimensioned to have a center of gravity lying on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the intramedullary pin's longitudinal axis and enclosing an angle beta relative to a plane defined by the transverse borehole axis and the intramedullary pin's longitudinal axis, where angle beta is between 0 and 100 degrees or between 0 and -100 degrees*** (emphasis added by the examiner). First, the examiner would like to note that the emphasized areas are functionally recited, i.e. configured and dimension to..., and the device only needs to be capable of performing the function of the device. Second, the examiner would like to note that Chemello discloses a device that fully discloses the limitations of the claim. Chemello discloses a device comprising an intramedullary pin and a bone plate (best shown in Figure 2). The bone plate includes an angled tab (91) capable of contacting the greater trochanter. The tab is configured and dimensioned to include a center of gravity, wherein a projection of the center of gravity that lies on a projected radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle beta defined by the projection of a transverse borehole axis and the projected center of gravity of the angled tab, wherein the angle beta is

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between 0 and 100 degrees or 0 and -100 degrees. The bone plate of Chemello is capable of being rotated about the proximal end of the intramedullary nail and therefore the center of gravity of the angled tab can be projected to lie on a radius of a projected cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis, wherein an angle between a projected axis of the transverse borehole and the projected center of gravity is capable of being located at an angle of between 0 and 180 degrees or 0 and -180 degrees. The examiner would like to note that the specification discloses that all these relationships are based on projections of the cross-sectional area, the transverse bore axis, and the center of gravity of the tab (see page 2 lines 23-31, page 4 lines 22-30, and Figure 2 of the reference).

B. Claims 6 and 16 under 35 U.S.C. 103(a) over Chemello

The applicant's argument that Chemello does not disclose the invention of claim 1 and therefore claims 6 and 16 are also allowable is not persuasive as discussed above.

C. Claims 1, 4-8, 13, and 16 under 35 U.S.C. 103(a) over Stedtfeld in view of Chemello.

The applicant's argument that the combination of Stedtfeld in view of Chemello does not disclose the invention as claimed is not persuasive. Stedtfeld discloses an intramedullary nail including a proximal end, a distal tip, and a longitudinal axis. The proximal half of the intramedullary pin includes two transverse boreholes defining a transverse borehole axis and the distal half includes at least two transverse grooves passing through the intramedullary pin. Stedtfeld fails to disclose the device

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further comprising a bone plate including an angled tab. The applicant argues that Chemello does not disclose a bone plate having an angled tab configured and dimensioned to have a center of gravity lying on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the intramedullary pin's longitudinal axis and enclosing an angle  $\beta$  relative to a plane defined by the transverse borehole axis and the intramedullary pin's longitudinal axis, where angle  $\beta$  is between 0 and 100 degrees or between 0 and -100 degrees. The examiner has presented a response directed to these arguments as discussed above.

D. Claim 14 under 35 U.S.C. 103(a) over Stedtfeld in view of Chemello further in view of Pennig.

The applicant's argument that the combination of Stedtfeld in view of Chemello does not disclose the invention as claims 1, 4-8, 13, and 16 and therefore claim 14 is allowable is not persuasive as discussed above.

E. Claim 18 under 35 U.S.C. 103(a) over Stedtfeld in view of Chemello further in view of Seidel.

The applicant's argument that the combination of Stedtfeld in view of Chemello does not disclose the invention as claims 1, 4-8, 13, and 16 and therefore claim 18 is allowable is not persuasive as discussed above.

F. Claims 17, 19, and 20 under 103(a) over Stedtfeld in view of Chemello further in view of Seidel further in view of Pennig.

The applicant's argument that the combination of Stedtfeld in view of Chemello does not disclose the invention as claims 1, 4-8, 13, and 16 and therefore claims 17, 19, and 20 are allowable is not persuasive as discussed above.

G. Claims 1, 9, 11, and 12 under 35 U.S.C. 103(a) over Aginsky in view of Chemello.

The applicant's argument that Aginsky does not disclose a device comprising a bone plate including an angled tab ***configured and dimensioned to have a center of gravity lying on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the intramedullary pin's longitudinal axis and enclosing an angle beta relative to a plane defined by the transverse borehole axis and the intramedullary pin's longitudinal axis, where angle beta is between 0 and 100 degrees or between 0 and -100 degrees*** (emphasis added by the examiner). First, the examiner would like to note that the emphasized areas are functionally recited, i.e. configured and dimensioned to..., and the device only needs to be capable of performing the function of the device. Second, the examiner would like to note that Aginsky discloses a device that fully discloses the limitations of the claim. Aginsky discloses a device comprising an intramedullary pin and a bone plate (best shown in Figures 1 and 6). The bone plate includes an angled tab (18) capable of contacting the greater trochanter. The tab is configured and dimensioned to include a center of gravity, wherein a projection of the center of gravity that lies on a projected radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin. The bone plate of Aginsky is capable of being rotated about the proximal end of the

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intramedullary nail and therefore the center of gravity of the angled tab can be projected to lie on a radius of a projected cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis. Aginsky fails to disclose the intramedullary pin including a transverse borehole in the proximal half of the intramedullary pin. Chemello teaches a device comprising a transverse borehole in the proximal half of an intramedullary nail in order to insert a transverse screw through the intramedullary pin. The combination would therefore disclose a device wherein the intramedullary pin includes a transverse borehole in the proximal half of the intramedullary pin, wherein a transverse borehole axis is capable of being projected onto a projected cross-sectional area of the intramedullary pin. Since the bone plate of Aginsky is capable of being rotated about the proximal end of the intramedullary pin, a projection of the center of gravity of the angle tap is capable of being projected onto a projected cross-sectional area of the intramedullary pin such that the projected center of gravity is at an angle between 0 and 100 degrees or 0 and -100 degrees relative to the projected transverse borehole axis. The examiner would like to note that the specification discloses that all these relationships are based on projections of the cross-sectional area, the transverse bore axis, and the center of gravity of the tab (see page 2 lines 23-31, page 4 lines 22-30, and Figure 2 of the reference).

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.



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Respectfully submitted,

/Nicholas Woodall/

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Art Unit 3733

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